Chesapeake Bay TMDL:
Legal Issues and Local Implications

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Monday, October 24, 2011

The Chesapeake Bay TMDL

- EPA sets pollution diet to meet states' Bay clean water standards
- Caps on nitrogen, phosphorus and sediment loads for all 6 Bay watershed states and DC
- States set load caps for point and non-point sources

Clean Water Act TMDL Program

- Identify Impaired Waters and develop cleanup plans
- Obligation stems from 1972 CWA
- Settlement of TMDL lawsuits in VA and DC set schedule

Clean Water Act Chesapeake Bay Program

- EPA and states cooperating on education and restoration
- Added to CWA in 1987
- Settlement of lawsuit filed by CBF reaffirms schedule

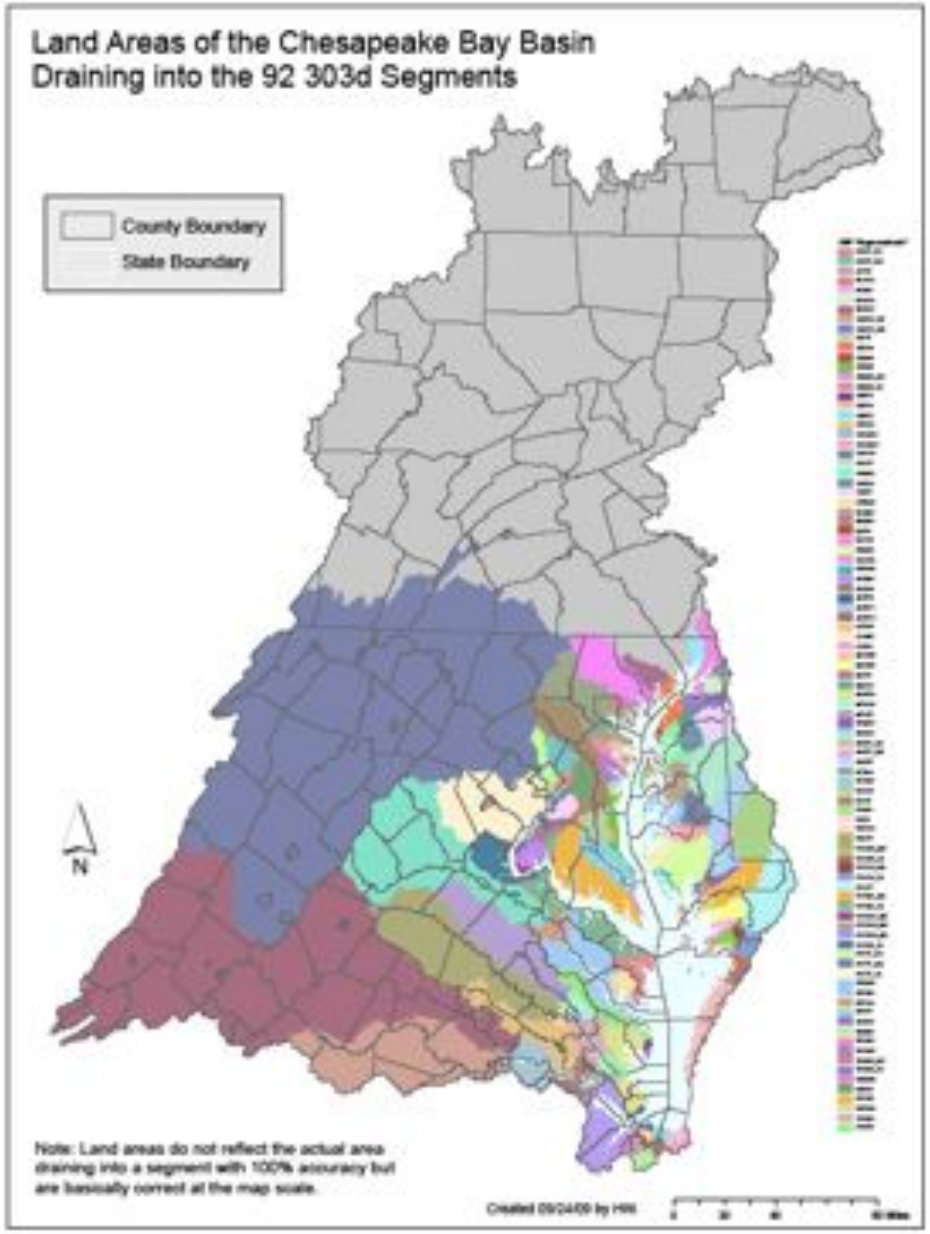
Obama Executive Order - 2009

- Directed study and restoration activities among multiple federal agencies

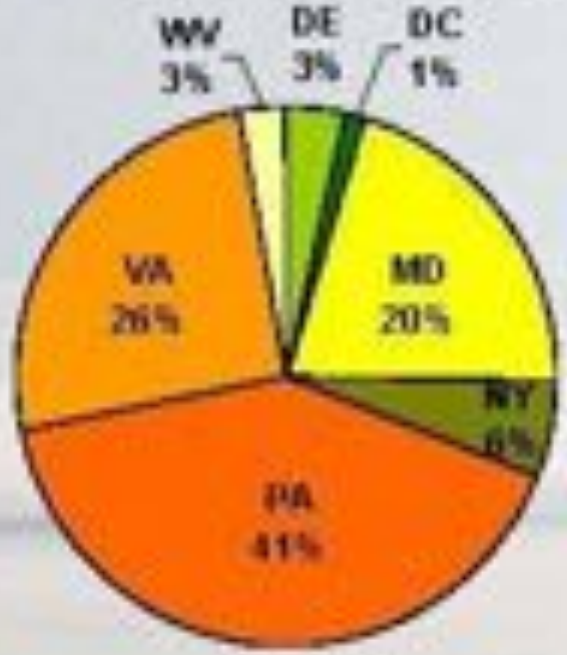
Chesapeake Bay Watershed-
By the Numbers

- Largest U.S. estuary
- Six-states and DC, 64,000 square mile watershed
- 10,000 miles of shoreline (longer then entire U.S. west coast)
- Over 3,600 species of plants, fish and other animals
- Average depth: 21 feet
- $750 million contribution annually to local economies
- Home to 17 million people (and counting)
- 77,000 principally family farms
- Declared "national treasure" by President Obama

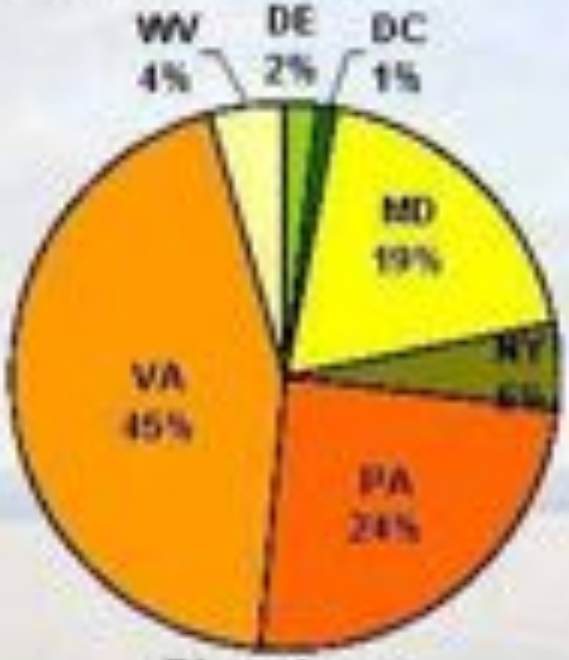
Low to no dissolved oxygen in the Bay every summer


Land Areas of the Chesapeake Bay Basin
Draining into the 92 303d Segments
County Boundary
State Boundary
N
Note: Land areas do not reflect the actual area draining into a segment with 100% accuracy but are basically correct at the map scale.

Nutrient Loads by State



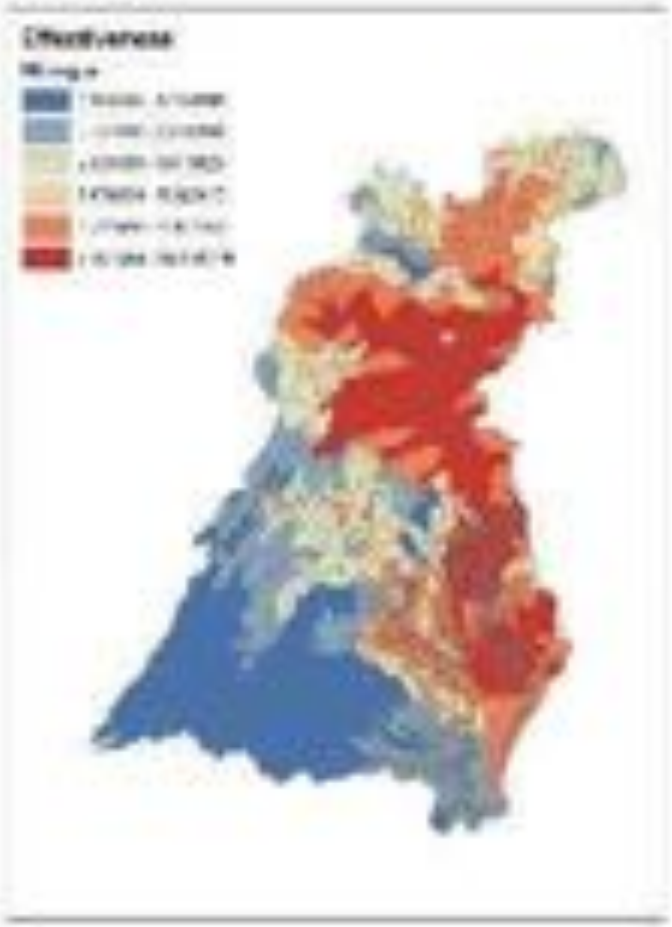
Nitrogen*

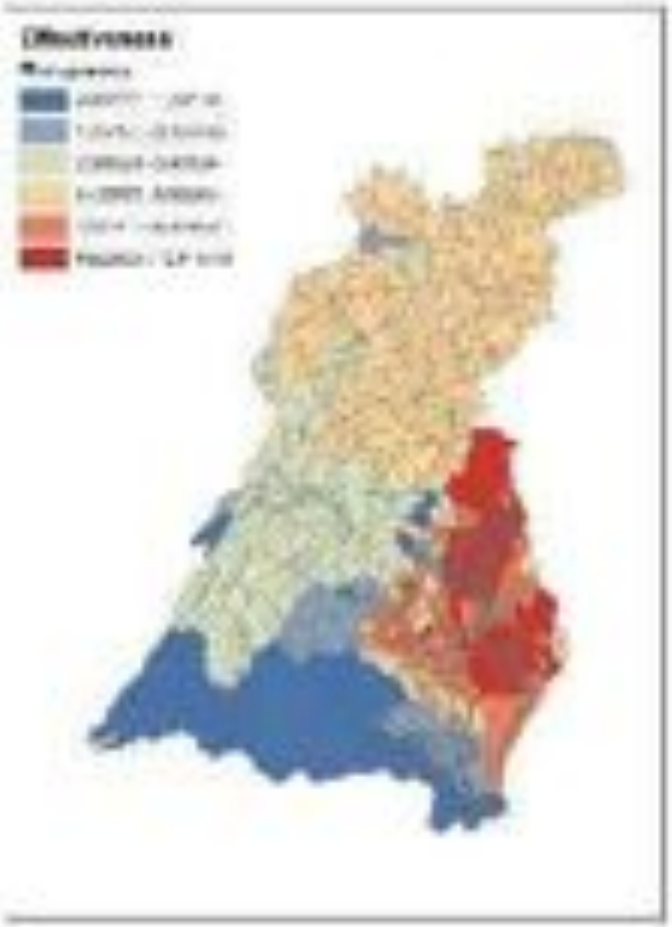


Phosphorus

*EPA estimates a nitrogen load of 284 million lbs nitrogen in 2008. EPA assumes a reduction of 7 million lbs due to the Clean Air Act. This leaves 77 millions lbs to be addressed through the TMDL process.

Nutrient Impacts on Bay WQ

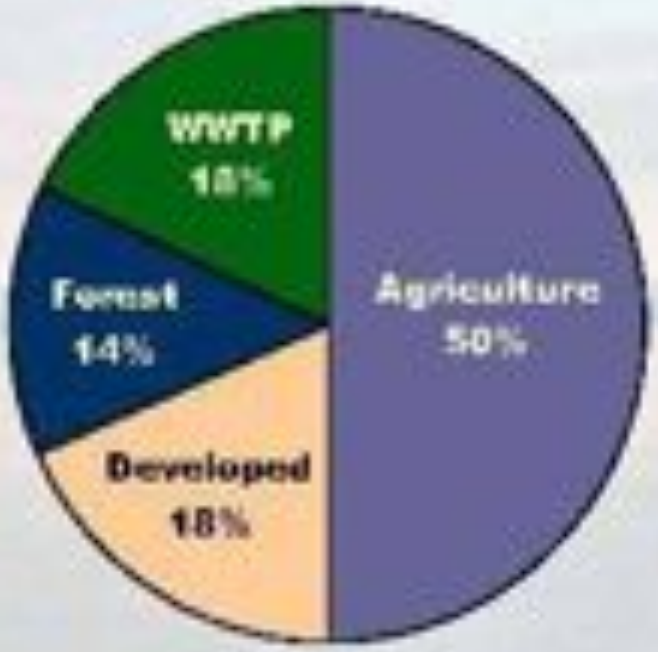




Nutrient Sources of VA

Sources of Nitrogen from Virginia

Sources of Phosphorus from Virginia



N and P values from 2008 Scenario of Phase 5.2 Watershed Model

Virginia's Watershed Implementation Plan: Overview

- Submitted 27 Nov 2010
- Accepted By EPA 29 Dec 2010
- Meets 2017 target loads for all basins through management actions, plus use of existing nutrient credits achieve those target loads.
- Proposes a broad expansion of the existing nutrient credit exchange.
- Includes plan for the James River for additional study of the current chlorophyll standard.
- Expected Revisions to the 2025 allocations in 2017.

James River Strategy

- Conduct scientific study to determine the most appropriate chlorophyll criteria for the tidal James River
- Concurrently, begin pollution reduction actions during Phase II of TMDL Implementation to achieve the 60% reduction target by 2017
- Initiate rulemaking under the Virginia Administrative Process Act to amend water quality standards, as needed
- Amend TMDL allocations for the James River Basin, as needed, in response to revised water quality standards
- Implements necessary management actions during Phase III to achieve TMDL allocations prior to 2025

Wastewater Proposals

- Will meet allocations through Watershed General Permit that establishes nutrient caps for all significant discharges and ability to trade
- Propose additional reductions of 2.6 million lbs of N and 200,000 lbs of P in the James basin and 42,500 lbs of P in the York
- Propose new facilities under 1000 gpd must offset entire nutrient load.
- Propose offsets for nutrient loads from small dischargers expanding to less than 40,000 gallons per day

Onsite/Septic Proposals

- New or replacement systems in the Chesapeake Bay watershed utilize nitrogen reducing technology and implementation of new regulations for alternative systems that are currently under development.
- Establishing a tax credit or other financial incentive for the upgrade or replacement of existing conventional systems with systems that have nitrogen removal technologies.
- The plan proposes requiring septic pumpouts in areas outside those governed by the Chesapeake Bay Preservation Act which currently requires pumpouts every 5 years.

Agriculture/Forestry Proposals

- Extensive implementation of resource management plans on agricultural acres which could result in implementation of these practices:
  - nutrient management plans
  - livestock exclusion from streams
  - 35' stream buffers
  - soil conservation
- Vastly improved accounting of voluntary practices.
- Improved implementation of forestry water quality BMP requirements.

Urban/Suburban Stormwater Proposals

- The plan proposes urban nutrient management plans on golf courses, municipally owned lands.
- The plan proposes restrictions on do-it-yourself non-agricultural lawn and turf fertilizers including "P ban"
- The plan proposes a 20% phosphorus reduction standard for areas being redeveloped.
- The plan proposes stormwater *retrofits* on existing developed lands to reduce nitrogen, phosphorus and sediment.
- For new development, post development loads cannot exceed allowed loads of previous land uses

Phase II Development

- Further divide final allocations for "39" segment sheds
- Work with local elected officials, staff, conservation districts, watershed associations and citizens to identify strategies to be implemented
- Provide additional detail on programs, technologies, and practices to implement by 2017
- Include updates resulting from revisions to the Bay Watershed Model.
- Include specific programs and practices in the first 2-year milestones (2012-2013)

Resource Management Plans

Established by 2011 legislature as protection for farmers from excessive requirements under TMDL

Regulations under development now

RMPs will be based on individual on-farm assessments; compliance will protect farmers

Goal to have regulations in place and effective by July 1, 2012

Expanding Nutrient Credit Exchange

Legislature interested in expanding trading program

Study ongoing and expected to result in proposed legislation for 2012

Key issues: baseline
availability of credits
credit ratios – point source, nonpoint source
certification, enforcement and accountability
incorporation in permits
use of private or public nutrient banks or funds
offsets produced by generation of electricity from animal waste

2-Year Increments or Milestones

After TMDL and WIPs comes the 2-Year Milestone

2-year plans with more detailed projections for how reductions will be achieved, with “contingencies” and “consequences”

First 2-year plans submitted by states prior to finalization of TMDL; nearing end of reporting period

Next 2-year plan will be submitted in November 2011 and begin in January 2012

Public process of reviewing progress reports and proposed plans

Bay TMDL Litigation

American Farm Bureau Federation and National Homebuilders Ass'n both filed suit against EPA in federal district court in Pennsylvania

Claims include EPA lacked authority to prepare TMDL, Bay model flawed, data incomplete, opportunities for public input inadequate, etc.

Environmentalists, lead by CBF, and wastewater treatment utilities have intervened in support of EPA and the TMDL

Motions for summary judgment will likely be heard next fall

Questions about the Bay TMDL Model

Models are just that … models

Some model flaws corrected, some data sets improved

LimnoTech prepared critique of Bay model for Farm Bureau

CBP Science and Technical Advisory Committee (STAC) recently responded to LimnoTech report with robust criticism of the report and further defense of the model

Stay tuned!

Bay TMDL: Bottom-line

- Actions will clean and protect local waters in VA thereby supporting the local economy
- Restore a thriving Chesapeake Bay
- Federal, state, local officials and agencies will be fully accountable to the public
- Consequences for inaction, lack of progress

Successes to Date

- Much has been done using voluntary, incentive based, and regulatory programs
- 1985 Loads
  - 102 million pounds Nitrogen
  - 12.4 million pounds Phosphorus
- 2008 Estimated Loads
  - 72.8 million pounds Nitrogen
  - 7.2 million pounds Phosphorus

Further Information

- Chesapeake Bay TMDL web sites:

www.epa.gov/chesapeakebaytmdl

www.dcr.virginia.gov

www.deq.virginia.gov